Modern Concepts of Cardiovascular Disease

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ANGINA PECTORIS

Angina pectoris is the name given to a group of symptoms that in typical cases permit of easy recognition. The patient is usually an adult male. On effort such as walking he has a sense of tightness or pressure in the sternal region which may become an agonizing pain, radiating to the neck, shoulder, arm, especially the left arm. It may be felt as a pain or numbness even to the wrist or fingers. His suffering and his consciousness of the gravity of the condition—the *angor animi,* sense of impending death—compel him to stop. He stands or sits, seldom lying down. In a few seconds or minutes, perhaps with the eructation of gas, the attack is over and he is again able to walk, though slowly. These attacks are especially likely to recur after a heavy meal, or if the attempt is made to walk up an incline or against a head wind. Excitement or a fit of anger may bring them on. They tend to become more frequent and severe and to be provoked by milder causes until the sufferer is greatly restricted in his activities. Sudden death may occur in any attack.

Today the belief of the majority is that the underlying pathologic lesion is a narrowing of the coronary artery generally by arteriosclerosis. When with this lesion a demand is made as by effort for an increase in the blood supply to the myocardium it cannot be met in a normal way, relative ischemia results and pain is its manifestation, an intermittent claudication of the heart. Perhaps ten per cent of patients are women. Syphilis is not by any means a predominating factor in causation. Hypertension and palpably thickened peripheral arteries are often found on examination, but their absence does not justify the exclusion of angina pectoris; the coronaries may be sclerotic out of all proportion to the changes in other vessels.

All writers agree as to the serious character of the condition. While occasional recoveries are recorded and while not a few patients live for many years, ten to twenty perhaps, a large percentage die, often suddenly, within two to four years from the first attack. In many instances a terminal coronary thrombosis is the cause of the sudden death or it may be the beginning of a more gradual myocardial breakdown. In other fatal cases ventricular fibrillation presumably occurs.

It is important not to confuse other conditions with angina pectoris. In the neurosis sometimes called pseudo-angina the patient, perhaps a neurotic woman, has chest pain now in one place, now in

another, provoked often by psychic causes. She is apt to be restless, tossing in bed, complaining. The attack may last from minutes to many hours. One attack does not closely resemble another. When a coronary artery is acutely occluded by a thrombus the chest pain often comes on without preceding effort; it is unusually severe, often is located low over the sternum or even in the epigastrium, is not relieved by quiet or nitroglycerin but only by large doses of morphine, is accompanied by evidence of shock, disturbed cardiac action, drop in blood pressure, and dyspnea. In a few hours there are commonly leucocytosis and moderate fever, often a pericardial friction. Before diagnosing angina pectoris other causes for chest pain must be considered such as pleurisy, pneumonia, pericarditis, aneurysm, tabes, cervical and dorsal arthritis—a frequent confusing condition—must be considered as well as the pain from gallstones, ulcer of the stomach and spastic bowel.

Treatment is by no means a thankless task. There is often prolongation of life. Generally there is amelioration of suffering. For the attacks nitroglycerin is of great service. Rarely morphine is necessary. In the long run potassium iodide is one of the most reliable aids. Theobromin compounds—diuretin, theocin, theocalcin, euphyllin, etc.—in some instances seem to be of definite benefit.

After all it is more the mode of living than drugs that count. Overstrenuous activity and speed mania must be curtailed, hours of work reduced, loads of responsibility lessened, worries eliminated so far as possible. Shorter work days, longer vacation, relaxation, more sleep must be enjoined. Tobacco in excess is generally regarded as harmful. Some doctors forbid it entirely. Alcohol may be allowed only in moderation. Meals should not be heavy, food should be simple. Rest after meals is often beneficial. Surgery or the injection of the sympathetic nerves by alcohol has been practised. This treatment should be restricted to a small number of carefully selected cases.

Repeatedly patients desire explicit direction as to exactly how much they may do. Often the answer may be given that the patient may walk as far as he can. If he *can* walk a mile at a moderate pace without a paroxysm he *may* do so, if he cannot it is not permissible. And so as to other activities. He must keep within his limits. Details of work and play must be discussed as individual matters and not according to some general fixed rules. The question as to golf is repeatedly put up to the physician. Here individualization is necessary. I must admit that I have become more hesitant about allowing free golf playing than formerly. Restriction is often advisable. The condensed advice is: "Go slow—take it easy."

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SELECTED ABSTRACT

Strouse, S., Soskin, S., Katz, L. N., and Rubinfeld, S. H.: "Treatment of Older Diabetic Patients with Cardiovascular Disease." J.A.M.A. 98: 1703, May 14, 1932.

Strouse and associates call attention to the harmful effects which may follow a rapid lowering of blood sugar in diabetics with cardiovascular disease. They stress not only the danger of anginal attacks and coronary thrombosis incurred by large doses of insulin, but also the tendency for such attacks to occur when the blood sugar is reduced, either by diet or by small doses of insulin, below the level to which the patient has become accustomed. From their studies added weight is given to the contention of Smith and others that in patients with myocardial disease the diet must contain a generous allowance of carbohydrate.